

ABSTRACT OF THE DISCLOSURE

There is provided a semiconductor photodetector which comprises (i)an InP substrate(1), (ii)an optical waveguide(5) having an N-type semiconductor layer(32) formed on the InP substrate(1), an optical waveguide core layer(3) formed on a partial area of the N-type semiconductor layer(32), and an upper cladding layer(4) formed on the optical waveguide core layer(3), and (iii)an avalanche photodiode(17) constructed by forming a photo absorbing layer(33), a heterobarrier relaxing layer(34), an underlying layer(14a) of a N-type field dropping layer(35), an overlying layer(14b) of the N-type field dropping layer(35), a carrier multiplying layer(36), and a P-type semiconductor layer(37) in sequence on another area of the N-type semiconductor layer(32), and coupled to the optical waveguide(5), wherein a side surface of the underlying layer(14a) of the N-type field dropping layer(35) comes into contact with a side surface of the optical waveguide core layer(3), and a part of the overlying layer(14b) of the N-type field dropping layer(35) is formed on the optical waveguide core layer(3).